



SEQUENCE LISTING

<110> Xia, Yu-Ping et al.

<120> METHODS FOR TREATING INFLAMMATORY SKIN DISEASES

<130> REG 710b

<140> 09/773,877

<141> 2001-01-31

<160> 27

<170> PatentIn version 3.0

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1	5 10 15															
tgt ctg ctt ctc aca gga tct agt tca ggt tca aaa tta aaa gat cct																96
Cys Leu Leu Leu Thr Gly Ser Ser Ser Gly Ser Lys Leu Lys Asp Pro																
	20 25 30															
gaa ctg agt tta aaa ggc acc cag cac atc atg caa gca ggc cag aca																144
Glu Leu Ser Leu Lys Gly Thr Gln His Ile Met Gln Ala Gly Gln Thr																
	35 40 45															
ctg cat ctc caa tgc agg ggg gaa gca gcc cat aaa tgg tct ttg cct																192
Leu His Leu Gln Cys Arg Gly Glu Ala Ala His Lys Trp Ser Leu Pro																
	50 55 60															
gaa atg gtg agt aag gaa agc gaa agg ctg agc ata act aaa tct gcc																240
Glu Met Val Ser Lys Glu Ser Glu Arg Leu Ser Ile Thr Lys Ser Ala																
65	70 75 80															
tgt gga aga aat ggc aaa caa ttc tgc agt act tta acc ttg aac aca																288
Cys Gly Arg Asn Gly Lys Gln Phe Cys Ser Thr Leu Thr Leu Asn Thr																
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gct caa gca aac cac act ggc ttc tac agc tgc aaa tat cta gct gta																336
Ala Gln Ala Asn His Thr Gly Phe Tyr Ser Cys Lys Tyr Leu Ala Val																
	100 105 110															
cct act tca aag aag aag gaa aca gaa tct gca atc tat ata ttt att																384
Pro Thr Ser Lys Lys Lys Glu Thr Glu Ser Ala Ile Tyr Ile Phe Ile																
	115 120 125															
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Ser Asp Thr Gly Arg Pro Phe Val Glu Met Tyr Ser Glu Ile Pro Glu																
	130 135 140															
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Ile Ile His Met Thr Glu Gly Arg Glu Leu Val Ile Pro Cys Arg Val																
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acg tca cct aac atc act gtt act tta aaa aag ttt cca ctt gac act																528
Thr Ser Pro Asn Ile Thr Val Thr Leu Lys Lys Phe Pro Leu Asp Thr																
	165 170 175															
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Leu Ile Pro Asp Gly Lys Arg Ile Ile Trp Asp Ser Arg Lys Gly Phe																
	180 185 190															
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Ile Ile Ser Asn Ala Thr Tyr Lys Glu Ile Gly Leu Leu Thr Cys Glu																
	195 200 205															
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Ala Thr Val Asn Gly His Leu Tyr Lys Thr Asn Tyr Leu Thr His Arg																
	210 215 220															
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Lys	Leu	Leu	Arg	Gly	His	Thr	Leu	Val	Leu	Asn	Cys	Thr	Ala	Thr	Thr	
				245					250					255		
ccc	ttg	aac	acg	aga	gtt	caa	atg	acc	tgg	agt	tac	cct	gat	gaa	aaa	816
Pro	Leu	Asn	Thr	Arg	Val	Gln	Met	Thr	Trp	Ser	Tyr	Pro	Asp	Glu	Lys	
			260					265					270			
aat	aag	aga	gct	tcc	gta	agg	cga	cga	att	gac	caa	agc	aat	tcc	cat	864
Asn	Lys	Arg	Ala	Ser	Val	Arg	Arg	Arg	Ile	Asp	Gln	Ser	Asn	Ser	His	
		275					280					285				
gcc	aac	ata	ttc	tac	agt	gtt	ctt	act	att	gac	aaa	atg	cag	aac	aaa	912
Ala	Asn	Ile	Phe	Tyr	Ser	Val	Leu	Thr	Ile	Asp	Lys	Met	Gln	Asn	Lys	
	290					295					300					
gac	aaa	gga	ctt	tat	act	tgt	cgt	gta	agg	agt	gga	cca	tca	ttc	aaa	960
Asp	Lys	Gly	Leu	Tyr	Thr	Cys	Arg	Val	Arg	Ser	Gly	Pro	Ser	Phe	Lys	
305					310					315					320	
tct	gtt	aac	acc	tca	gtg	cat	ata	tat	gat	aaa	gca	ggc	ccg	ggc	gag	1008
Ser	Val	Asn	Thr	Ser	Val	His	Ile	Tyr	Asp	Lys	Ala	Gly	Pro	Gly	Glu	
				325					330					335		
ccc	aaa	tct	tgt	gac	aaa	act	cac	aca	tgc	cca	ccg	tgc	cca	gca	cct	1056
Pro	Lys	Ser	Cys	Asp	Lys	Thr	His	Thr	Cys	Pro	Pro	Cys	Pro	Ala	Pro	
			340					345					350			
gaa	ctc	ctg	ggg	gga	ccg	tca	gtc	ttc	ctc	ttc	ccc	cca	aaa	ccc	aag	1104
Glu	Leu	Leu	Gly	Gly	Pro	Ser	Val	Phe	Leu	Phe	Pro	Pro	Lys	Pro	Lys	
		355					360					365				
gac	acc	ctc	atg	atc	tcc	cgg	acc	cct	gag	gtc	aca	tgc	gtg	gtg	gtg	1152
Asp	Thr	Leu	Met	Ile	Ser	Arg	Thr	Pro	Glu	Val	Thr	Cys	Val	Val	Val	
	370					375					380					
gac	gtg	agc	cac	gaa	gac	cct	gag	gtc	aag	ttc	aac	tgg	tac	gtg	gac	1200
Asp	Val	Ser	His	Glu	Asp	Pro	Glu	Val	Lys	Phe	Asn	Trp	Tyr	Val	Asp	
385					390					395					400	
ggc	gtg	gag	gtg	cat	aat	gcc	aag	aca	aag	ccg	cgg	gag	gag	cag	tac	1248
Gly	Val	Glu	Val	His	Asn	Ala	Lys	Thr	Lys	Pro	Arg	Glu	Glu	Gln	Tyr	
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aac	agc	acg	tac	cgt	gtg	gtc	agc	gtc	ctc	acc	gtc	ctg	cac	cag	gac	1296
Asn	Ser	Thr	Tyr	Arg	Val	Val	Ser	Val	Leu	Thr	Val	Leu	His	Gln	Asp	
			420					425					430			
tgg	ctg	aat	ggc	aag	gag	tac	aag	tgc	aag	gtc	tcc	aac	aaa	gcc	ctc	1344
Trp	Leu	Asn	Gly	Lys	Glu	Tyr	Lys	Cys	Lys	Val	Ser	Asn	Lys	Ala	Leu	
		435					440					445				
cca	gcc	ccc	atc	gag	aaa	acc	atc	tcc	aaa	gcc	aaa	ggg	cag	ccc	cga	1392

Pro	Ala	Pro	Ile	Glu	Lys	Thr	Ile	Ser	Lys	Ala	Lys	Gly	Gln	Pro	Arg	
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gaa cca cag gtg tac acc ctg ccc cca tcc cgg gat gag ctg acc aag																1440
Glu	Pro	Gln	Val	Tyr	Thr	Leu	Pro	Pro	Ser	Arg	Asp	Glu	Leu	Thr	Lys	
465					470					475					480	
aac cag gtc agc ctg acc tgc ctg gtc aaa ggc ttc tat ccc agc gac																1488
Asn	Gln	Val	Ser	Leu	Thr	Cys	Leu	Val	Lys	Gly	Phe	Tyr	Pro	Ser	Asp	
				485					490					495		
atc gcc gtg gag tgg gag agc aat ggg cag ccg gag aac aac tac aag																1536
Ile	Ala	Val	Glu	Trp	Glu	Ser	Asn	Gly	Gln	Pro	Glu	Asn	Asn	Tyr	Lys	
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acc acg cct ccc gtg ctg gac tcc gac ggc tcc ttc ttc ctc tac agc																1584
Thr	Thr	Pro	Pro	Val	Leu	Asp	Ser	Asp	Gly	Ser	Phe	Phe	Leu	Tyr	Ser	
		515					520					525				
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Lys	Leu	Thr	Val	Asp	Lys	Ser	Arg	Trp	Gln	Gln	Gly	Asn	Val	Phe	Ser	
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Glu Leu Ser Leu Lys Gly Thr Gln His Ile Met Gln Ala Gly Gln Thr																
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 65 70 75 80

Cys Gly Arg Asn Gly Lys Gln Phe Cys Ser Thr Leu Thr Leu Asn Thr
 85 90 95

Ala Gln Ala Asn His Thr Gly Phe Tyr Ser Cys Lys Tyr Leu Ala Val
 100 105 110

Pro Thr Ser Lys Lys Lys Glu Thr Glu Ser Ala Ile Tyr Ile Phe Ile
 115 120 125

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 130 135 140

Ile Ile His Met Thr Glu Gly Arg Glu Leu Val Ile Pro Cys Arg Val
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 165 170 175

Leu Ile Pro Asp Gly Lys Arg Ile Ile Trp Asp Ser Arg Lys Gly Phe
 180 185 190

Ile Ile Ser Asn Ala Thr Tyr Lys Glu Ile Gly Leu Leu Thr Cys Glu
 195 200 205

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 210 215 220

Gln Thr Asn Thr Ile Ile Asp Val Gln Ile Ser Thr Pro Arg Pro Val
 225 230 235 240

Lys Leu Leu Arg Gly His Thr Leu Val Leu Asn Cys Thr Ala Thr Thr
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Pro Leu Asn Thr Arg Val Gln Met Thr Trp Ser Tyr Pro Asp Glu Lys
 260 265 270

Asn Lys Arg Ala Ser Val Arg Arg Arg Ile Asp Gln Ser Asn Ser His

275	280	285
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Ser Val Asn Thr Ser Val His Ile Tyr Asp Lys Ala Gly Pro Gly Glu 325 330 335		
Pro Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro 340 345 350		
Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys 355 360 365		
Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val 370 375 380		
Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp 385 390 395 400		
Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr 405 410 415		
Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp 420 425 430		
Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu 435 440 445		
Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg 450 455 460		
Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys 465 470 475 480		
Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp 485 490 495		
Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys 500 505 510		

Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser
515 520 525

Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser
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Glu Leu Ser Leu Lys Gly Thr Gln His Ile Met Gln Ala Gly Gln Thr
35 40 45
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Leu His Leu Gln Cys Arg Gly Glu Ala Ala His Lys Trp Ser Leu Pro
50 55 60
gaa atg gtg agt aag gaa agc gaa agg ctg agc ata act aaa tct gcc 240
Glu Met Val Ser Lys Glu Ser Glu Arg Leu Ser Ile Thr Lys Ser Ala
65 70 75 80

tgt gga aga aat ggc aaa caa ttc tgc agt act tta acc ttg aac aca	288
Cys Gly Arg Asn Gly Lys Gln Phe Cys Ser Thr Leu Thr Leu Asn Thr	
85 90 95	
gct caa gca aac cac act ggc ttc tac agc tgc aaa tat cta gct gta	336
Ala Gln Ala Asn His Thr Gly Phe Tyr Ser Cys Lys Tyr Leu Ala Val	
100 105 110	
cct act tca aag aag aag gaa aca gaa tct gca atc tat ata ttt att	384
Pro Thr Ser Lys Lys Lys Glu Thr Glu Ser Ala Ile Tyr Ile Phe Ile	
115 120 125	
agt gat aca ggt aga cct ttc gta gag atg tac agt gaa atc ccc gaa	432
Ser Asp Thr Gly Arg Pro Phe Val Glu Met Tyr Ser Glu Ile Pro Glu	
130 135 140	
att ata cac atg act gaa gga agg gag ctc gtc att ccc tgc cgg gtt	480
Ile Ile His Met Thr Glu Gly Arg Glu Leu Val Ile Pro Cys Arg Val	
145 150 155 160	
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Thr Ser Pro Asn Ile Thr Val Thr Leu Lys Phe Pro Leu Asp Thr	
165 170 175	
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Leu Ile Pro Asp Gly Lys Arg Ile Ile Trp Asp Ser Arg Lys Gly Phe	
180 185 190	
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Ile Ile Ser Asn Ala Thr Tyr Lys Glu Ile Gly Leu Leu Thr Cys Glu	
195 200 205	
gca aca gtc aat ggg cat ttg tat aag aca aac tat ctc aca cat cga	672
Ala Thr Val Asn Gly His Leu Tyr Lys Thr Asn Tyr Leu Thr His Arg	
210 215 220	
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Gln Thr Asn Thr Ile Ile Asp Val Gln Ile Ser Thr Pro Arg Pro Val	
225 230 235 240	
aaa tta ctt aga ggc cat act ctt gtc ctc aat tgt act gct acc act	768
Lys Leu Leu Arg Gly His Thr Leu Val Leu Asn Cys Thr Ala Thr Thr	
245 250 255	
ccc ttg aac acg aga gtt caa atg acc tgg agt tac cct gat gaa att	816
Pro Leu Asn Thr Arg Val Gln Met Thr Trp Ser Tyr Pro Asp Glu Ile	
260 265 270	
gac caa agc aat tcc cat gcc aac ata ttc tac agt gtt ctt act att	864
Asp Gln Ser Asn Ser His Ala Asn Ile Phe Tyr Ser Val Leu Thr Ile	
275 280 285	
gac aaa atg cag aac aaa gac aaa gga ctt tat act tgt cgt gta agg	912
Asp Lys Met Gln Asn Lys Asp Lys Gly Leu Tyr Thr Cys Arg Val Arg	
290 295 300	
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Ser Gly Pro Ser Phe Lys Ser Val Asn Thr Ser Val His Ile Tyr Asp	

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Lys Ala Gly Pro Gly Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys							
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cca ccg tgc cca gca cct gaa ctc ctg ggg gga ccg tca gtc ttc ctc							1056
Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu							
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ttc ccc cca aaa ccc aag gac acc ctc atg atc tcc cgg acc cct gag							1104
Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu							
		355		360		365	
gtc aca tgc gtg gtg gtg gac gtg agc cac gaa gac cct gag gtc aag							1152
Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys							
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Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys							
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Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu							
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Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys							
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gtc tcc aac aaa gcc ctc cca gcc ccc atc gag aaa acc atc tcc aaa							1344
Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys							
		435		440		445	
gcc aaa ggg cag ccc cga gaa cca cag gtg tac acc ctg ccc cca tcc							1392
Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser							
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Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys							
		465		470		475	480
ggc ttc tat ccc agc gac atc gcc gtg gag tgg gag agc aat ggg cag							1488
Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln							
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ccg gag aac aac tac aag acc acg cct ccc gtg ctg gac tcc gac ggc							1536
Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly							
		500		505		510	
tcc ttc ttc ctc tac agc aag ctc acc gtg gac aag agc agg tgg cag							1584
Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln							
		515		520		525	
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Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn							
		530		535		540	

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1674

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 35 40 45

Leu His Leu Gln Cys Arg Gly Glu Ala Ala His Lys Trp Ser Leu Pro
 50 55 60

Glu Met Val Ser Lys Glu Ser Glu Arg Leu Ser Ile Thr Lys Ser Ala
 65 70 75 80

Cys Gly Arg Asn Gly Lys Gln Phe Cys Ser Thr Leu Thr Leu Asn Thr
 85 90 95

Ala Gln Ala Asn His Thr Gly Phe Tyr Ser Cys Lys Tyr Leu Ala Val
 100 105 110

Pro Thr Ser Lys Lys Lys Glu Thr Glu Ser Ala Ile Tyr Ile Phe Ile
 115 120 125

Ser Asp Thr Gly Arg Pro Phe Val Glu Met Tyr Ser Glu Ile Pro Glu
 130 135 140

Ile Ile His Met Thr Glu Gly Arg Glu Leu Val Ile Pro Cys Arg Val
 145 150 155 160

Thr Ser Pro Asn Ile Thr Val Thr Leu Lys Lys Phe Pro Leu Asp Thr
 165 170 175
 Leu Ile Pro Asp Gly Lys Arg Ile Ile Trp Asp Ser Arg Lys Gly Phe
 180 185 190
 Ile Ile Ser Asn Ala Thr Tyr Lys Glu Ile Gly Leu Leu Thr Cys Glu
 195 200 205
 Ala Thr Val Asn Gly His Leu Tyr Lys Thr Asn Tyr Leu Thr His Arg
 210 215 220
 Gln Thr Asn Thr Ile Ile Asp Val Gln Ile Ser Thr Pro Arg Pro Val
 225 230 235 240
 Lys Leu Leu Arg Gly His Thr Leu Val Leu Asn Cys Thr Ala Thr Thr
 245 250 255
 Pro Leu Asn Thr Arg Val Gln Met Thr Trp Ser Tyr Pro Asp Glu Ile
 260 265 270
 Asp Gln Ser Asn Ser His Ala Asn Ile Phe Tyr Ser Val Leu Thr Ile
 275 280 285
 Asp Lys Met Gln Asn Lys Asp Lys Gly Leu Tyr Thr Cys Arg Val Arg
 290 295 300
 Ser Gly Pro Ser Phe Lys Ser Val Asn Thr Ser Val His Ile Tyr Asp
 305 310 315 320
 Lys Ala Gly Pro Gly Glu Pro Lys Ser Cys Asp Lys Thr His Thr Cys
 325 330 335
 Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu
 340 345 350
 Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu
 355 360 365
 Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys
 370 375 380
 Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys
 385 390 395 400

Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu
405 410 415

Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys
420 425 430

Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys
435 440 445

Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser
450 455 460

Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys
465 470 475 480

Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln
485 490 495

Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly
500 505 510

Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln
515 520 525

Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn
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His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
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<211> 1359

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tgt ctg ctt ctc aca gga tct agt tcc gga ggt aga cct ttc gta gag      96
Cys Leu Leu Leu Thr Gly Ser Ser Ser Gly Gly Arg Pro Phe Val Glu
          20          25          30

atg tac agt gaa atc ccc gaa att ata cac atg act gaa gga agg gag      144
Met Tyr Ser Glu Ile Pro Glu Ile Ile His Met Thr Glu Gly Arg Glu
          35          40          45

ctc gtc att ccc tgc cgg gtt acg tca cct aac atc act gtt act tta      192
Leu Val Ile Pro Cys Arg Val Thr Ser Pro Asn Ile Thr Val Thr Leu
          50          55          60

aaa aag ttt cca ctt gac act ttg atc cct gat gga aaa cgc ata atc      240
Lys Lys Phe Pro Leu Asp Thr Leu Ile Pro Asp Gly Lys Arg Ile Ile
65          70          75          80

tgg gac agt aga aag ggc ttc atc ata tca aat gca acg tac aaa gaa      288
Trp Asp Ser Arg Lys Gly Phe Ile Ile Ser Asn Ala Thr Tyr Lys Glu
          85          90          95

ata ggg ctt ctg acc tgt gaa gca aca gtc aat ggg cat ttg tat aag      336
Ile Gly Leu Leu Thr Cys Glu Ala Thr Val Asn Gly His Leu Tyr Lys
          100          105          110

aca aac tat ctc aca cat cga caa acc aat aca atc ata gat gtc caa      384
Thr Asn Tyr Leu Thr His Arg Gln Thr Asn Thr Ile Ile Asp Val Gln
          115          120          125

ata agc aca cca cgc cca gtc aaa tta ctt aga ggc cat act ctt gtc      432
Ile Ser Thr Pro Arg Pro Val Lys Leu Leu Arg Gly His Thr Leu Val
          130          135          140

ctc aat tgt act gct acc act ccc ttg aac acg aga gtt caa atg acc      480
Leu Asn Cys Thr Ala Thr Thr Pro Leu Asn Thr Arg Val Gln Met Thr
145          150          155          160

tgg agt tac cct gat gaa att gac caa agc aat tcc cat gcc aac ata      528
Trp Ser Tyr Pro Asp Glu Ile Asp Gln Ser Asn Ser His Ala Asn Ile
          165          170          175

ttc tac agt gtt ctt act att gac aaa atg cag aac aaa gac aaa gga      576
Phe Tyr Ser Val Leu Thr Ile Asp Lys Met Gln Asn Lys Asp Lys Gly
          180          185          190

ctt tat act tgt cgt gta agg agt gga cca tca ttc aaa tct gtt aac      624
Leu Tyr Thr Cys Arg Val Arg Ser Gly Pro Ser Phe Lys Ser Val Asn
          195          200          205

acc tca gtg cat ata tat gat aaa gca ggc ccg ggc gag ccc aaa tct      672

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Thr	Ser	Val	His	Ile	Tyr	Asp	Lys	Ala	Gly	Pro	Gly	Glu	Pro	Lys	Ser		
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tgt	gac	aaa	act	cac	aca	tgc	cca	ccg	tgc	cca	gca	cct	gaa	ctc	ctg	720	
Cys	Asp	Lys	Thr	His	Thr	Cys	Pro	Pro	Cys	Pro	Ala	Pro	Glu	Leu	Leu	240	
225					230					235							
ggg	gga	ccg	tca	gtc	ttc	ctc	ttc	ccc	cca	aaa	ccc	aag	gac	acc	ctc	768	
Gly	Gly	Pro	Ser	Val	Phe	Leu	Phe	Pro	Pro	Lys	Pro	Lys	Asp	Thr	Leu	255	
				245					250								
atg	atc	tcc	cgg	acc	cct	gag	gtc	aca	tgc	gtg	gtg	gtg	gac	gtg	agc	816	
Met	Ile	Ser	Arg	Thr	Pro	Glu	Val	Thr	Cys	Val	Val	Val	Asp	Val	Ser	270	
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cac	gaa	gac	cct	gag	gtc	aag	ttc	aac	tgg	tac	gtg	gac	ggc	gtg	gag	864	
His	Glu	Asp	Pro	Glu	Val	Lys	Phe	Asn	Trp	Tyr	Val	Asp	Gly	Val	Glu	285	
		275						280									
gtg	cat	aat	gcc	aag	aca	aag	ccg	cgg	gag	gag	cag	tac	aac	agc	acg	912	
Val	His	Asn	Ala	Lys	Thr	Lys	Pro	Arg	Glu	Glu	Gln	Tyr	Asn	Ser	Thr	300	
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tac	cgt	gtg	gtc	agc	gtc	ctc	acc	gtc	ctg	cac	cag	gac	tgg	ctg	aat	960	
Tyr	Arg	Val	Val	Ser	Val	Leu	Thr	Val	Leu	His	Gln	Asp	Trp	Leu	Asn	320	
305					310					315							
ggc	aag	gag	tac	aag	tgc	aag	gtc	tcc	aac	aaa	gcc	ctc	cca	gcc	ccc	1008	
Gly	Lys	Glu	Tyr	Lys	Cys	Lys	Val	Ser	Asn	Lys	Ala	Leu	Pro	Ala	Pro	335	
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atc	gag	aaa	acc	atc	tcc	aaa	gcc	aaa	ggg	cag	ccc	cga	gaa	cca	cag	1056	
Ile	Glu	Lys	Thr	Ile	Ser	Lys	Ala	Lys	Gly	Gln	Pro	Arg	Glu	Pro	Gln	350	
			340					345									
gtg	tac	acc	ctg	ccc	cca	tcc	cgg	gat	gag	ctg	acc	aag	aac	cag	gtc	1104	
Val	Tyr	Thr	Leu	Pro	Pro	Ser	Arg	Asp	Glu	Leu	Thr	Lys	Asn	Gln	Val	365	
		355					360										
agc	ctg	acc	tgc	ctg	gtc	aaa	ggc	ttc	tat	ccc	agc	gac	atc	gcc	gtg	1152	
Ser	Leu	Thr	Cys	Leu	Val	Lys	Gly	Phe	Tyr	Pro	Ser	Asp	Ile	Ala	Val	380	
		370				375											
gag	tgg	gag	agc	aat	ggg	cag	ccg	gag	aac	aac	tac	aag	acc	acg	cct	1200	
Glu	Trp	Glu	Ser	Asn	Gly	Gln	Pro	Glu	Asn	Asn	Tyr	Lys	Thr	Thr	Pro	400	
385					390					395							
ccc	gtg	ctg	gac	tcc	gac	ggc	tcc	ttc	ttc	ctc	tac	agc	aag	ctc	acc	1248	
Pro	Val	Leu	Asp	Ser	Asp	Gly	Ser	Phe	Phe	Leu	Tyr	Ser	Lys	Leu	Thr	415	
				405					410								
gtg	gac	aag	agc	agg	tgg	cag	cag	ggg	aac	gtc	ttc	tca	tgc	tcc	gtg	1296	
Val	Asp	Lys	Ser	Arg	Trp	Gln	Gln	Gly	Asn	Val	Phe	Ser	Cys	Ser	Val	430	
			420					425									
atg	cat	gag	gct	ctg	cac	aac	cac	tac	acg	cag	aag	agc	ctc	tcc	ctg	1344	
Met	His	Glu	Ala	Leu	His	Asn	His	Tyr	Thr	Gln	Lys	Ser	Leu	Ser	Leu	445	
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 Ser Pro Gly Lys
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1359

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<211> 452

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<213> Artificial

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Met Tyr Ser Glu Ile Pro Glu Ile Ile His Met Thr Glu Gly Arg Glu
 35 40 45

Leu Val Ile Pro Cys Arg Val Thr Ser Pro Asn Ile Thr Val Thr Leu
 50 55 60

Lys Lys Phe Pro Leu Asp Thr Leu Ile Pro Asp Gly Lys Arg Ile Ile
 65 70 75 80

Trp Asp Ser Arg Lys Gly Phe Ile Ile Ser Asn Ala Thr Tyr Lys Glu
 85 90 95

Ile Gly Leu Leu Thr Cys Glu Ala Thr Val Asn Gly His Leu Tyr Lys
 100 105 110

Thr Asn Tyr Leu Thr His Arg Gln Thr Asn Thr Ile Ile Asp Val Gln
 115 120 125

Ile Ser Thr Pro Arg Pro Val Lys Leu Leu Arg Gly His Thr Leu Val
 130 135 140

Leu Asn Cys Thr Ala Thr Thr Pro Leu Asn Thr Arg Val Gln Met Thr
 145 150 155 160

Trp Ser Tyr Pro Asp Glu Ile Asp Gln Ser Asn Ser His Ala Asn Ile

165										170					175															
Phe	Tyr	Ser	Val	Leu	Thr	Ile	Asp	Lys	Met	Gln	Asn	Lys	Asp	Lys	Gly															
			180					185					190																	
Leu	Tyr	Thr	Cys	Arg	Val	Arg	Ser	Gly	Pro	Ser	Phe	Lys	Ser	Val	Asn															
		195					200					205																		
Thr	Ser	Val	His	Ile	Tyr	Asp	Lys	Ala	Gly	Pro	Gly	Glu	Pro	Lys	Ser															
	210					215					220																			
Cys	Asp	Lys	Thr	His	Thr	Cys	Pro	Pro	Cys	Pro	Ala	Pro	Glu	Leu	Leu															
225					230				235					240																
Gly	Gly	Pro	Ser	Val	Phe	Leu	Phe	Pro	Pro	Lys	Pro	Lys	Asp	Thr	Leu															
				245				250						255																
Met	Ile	Ser	Arg	Thr	Pro	Glu	Val	Thr	Cys	Val	Val	Val	Asp	Val	Ser															
			260					265					270																	
His	Glu	Asp	Pro	Glu	Val	Lys	Phe	Asn	Trp	Tyr	Val	Asp	Gly	Val	Glu															
		275					280					285																		
Val	His	Asn	Ala	Lys	Thr	Lys	Pro	Arg	Glu	Glu	Gln	Tyr	Asn	Ser	Thr															
	290					295					300																			
Tyr	Arg	Val	Val	Ser	Val	Leu	Thr	Val	Leu	His	Gln	Asp	Trp	Leu	Asn															
305					310				315					320																
Gly	Lys	Glu	Tyr	Lys	Cys	Lys	Val	Ser	Asn	Lys	Ala	Leu	Pro	Ala	Pro															
				325					330					335																
Ile	Glu	Lys	Thr	Ile	Ser	Lys	Ala	Lys	Gly	Gln	Pro	Arg	Glu	Pro	Gln															
			340					345					350																	
Val	Tyr	Thr	Leu	Pro	Pro	Ser	Arg	Asp	Glu	Leu	Thr	Lys	Asn	Gln	Val															
		355					360					365																		
Ser	Leu	Thr	Cys	Leu	Val	Lys	Gly	Phe	Tyr	Pro	Ser	Asp	Ile	Ala	Val															
	370					375					380																			
Glu	Trp	Glu	Ser	Asn	Gly	Gln	Pro	Glu	Asn	Asn	Tyr	Lys	Thr	Thr	Pro															
385					390				395						400															

Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr
405 410 415

Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser Val
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Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu
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Ser Pro Gly Lys
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tgt ctg ctt ctc aca gga tct agt tcc gga ggt aga cct ttc gta gag	96
Cys Leu Leu Leu Thr Gly Ser Ser Ser Gly Gly Arg Pro Phe Val Glu	
20 25 30	

atg tac agt gaa atc ccc gaa att ata cac atg act gaa gga agg gag	144
Met Tyr Ser Glu Ile Pro Glu Ile Ile His Met Thr Glu Gly Arg Glu	
35 40 45	

ctc gtc att ccc tgc cgg gtt acg tca cct aac atc act gtt act tta	192
Leu Val Ile Pro Cys Arg Val Thr Ser Pro Asn Ile Thr Val Thr Leu	
50 55 60	

aaa aag ttt cca ctt gac act ttg atc cct gat gga aaa cgc ata atc	240
Lys Lys Phe Pro Leu Asp Thr Leu Ile Pro Asp Gly Lys Arg Ile Ile	
65 70 75 80	

tgg gac agt aga aag ggc ttc atc ata tca aat gca acg tac aaa gaa	288
Trp Asp Ser Arg Lys Gly Phe Ile Ile Ser Asn Ala Thr Tyr Lys Glu	
85 90 95	
ata ggg ctt ctg acc tgt gaa gca aca gtc aat ggg cat ttg tat aag	336
Ile Gly Leu Leu Thr Cys Glu Ala Thr Val Asn Gly His Leu Tyr Lys	
100 105 110	
aca aac tat ctc aca cat cga caa acc aat aca atc ata gat gtc caa	384
Thr Asn Tyr Leu Thr His Arg Gln Thr Asn Thr Ile Ile Asp Val Gln	
115 120 125	
ata agc aca cca cgc cca gtc aaa tta ctt aga ggc cat act ctt gtc	432
Ile Ser Thr Pro Arg Pro Val Lys Leu Leu Arg Gly His Thr Leu Val	
130 135 140	
ctc aat tgt act gct acc act ccc ttg aac acg aga gtt caa atg acc	480
Leu Asn Cys Thr Ala Thr Thr Pro Leu Asn Thr Arg Val Gln Met Thr	
145 150 155 160	
tgg agt tac cct gat gaa aaa aat aag aga gct tcc gta agg cga cga	528
Trp Ser Tyr Pro Asp Glu Lys Asn Lys Arg Ala Ser Val Arg Arg Arg	
165 170 175	
att gac caa agc aat tcc cat gcc aac ata ttc tac agt gtt ctt act	576
Ile Asp Gln Ser Asn Ser His Ala Asn Ile Phe Tyr Ser Val Leu Thr	
180 185 190	
att gac aaa atg cag aac aaa gac aaa gga ctt tat act tgt cgt gta	624
Ile Asp Lys Met Gln Asn Lys Asp Lys Gly Leu Tyr Thr Cys Arg Val	
195 200 205	
agg agt gga cca tca ttc aaa tct gtt aac acc tca gtg cat ata tat	672
Arg Ser Gly Pro Ser Phe Lys Ser Val Asn Thr Ser Val His Ile Tyr	
210 215 220	
gat aaa gca ggc ccg ggc gag ccc aaa tct tgt gac aaa act cac aca	720
Asp Lys Ala Gly Pro Gly Glu Pro Lys Ser Cys Asp Lys Thr His Thr	
225 230 235 240	
tgc cca ccg tgc cca gca cct gaa ctc ctg ggg gga ccg tca gtc ttc	768
Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe	
245 250 255	
ctc ttc ccc cca aaa ccc aag gac acc ctc atg atc tcc cgg acc cct	816
Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro	
260 265 270	
gag gtc aca tgc gtg gtg gtg gac gtg agc cac gaa gac cct gag gtc	864
Glu Val Thr Cys Val Val Val Val Asp Val Ser His Glu Asp Pro Glu Val	
275 280 285	
aag ttc aac tgg tac gtg gac ggc gtg gag gtg cat aat gcc aag aca	912
Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr	
290 295 300	

aag ccg cgg gag gag cag tac aac agc acg tac cgt gtg gtc agc gtc	960
Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val	
305 310 315 320	
ctc acc gtc ctg cac cag gac tgg ctg aat ggc aag gag tac aag tgc	1008
Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys	
325 330 335	
aag gtc tcc aac aaa gcc ctc cca gcc ccc atc gag aaa acc atc tcc	1056
Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser	
340 345 350	
aaa gcc aaa ggg cag ccc cga gaa cca cag gtg tac acc ctg ccc cca	1104
Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro	
355 360 365	
tcc cgg gat gag ctg acc aag aac cag gtc agc ctg acc tgc ctg gtc	1152
Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val	
370 375 380	
aaa ggc ttc tat ccc agc gac atc gcc gtg gag tgg gag agc aat ggg	1200
Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly	
385 390 395 400	
cag ccg gag aac aac tac aag acc acg cct ccc gtg ctg gac tcc gac	1248
Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp	
405 410 415	
ggc tcc ttc ttc ctc tac agc aag ctc acc gtg gac aag agc agg tgg	1296
Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp	
420 425 430	
cag cag ggg aac gtc ttc tca tgc tcc gtg atg cat gag gct ctg cac	1344
Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His	
435 440 445	
aac cac tac acg cag aag agc ctc tcc ctg tct ccg ggt aaa tga	1389
Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys	
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<211> 462

<212> PRT

<213> Artificial

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Met Tyr Ser Glu Ile Pro Glu Ile Ile His Met Thr Glu Gly Arg Glu
 35 40 45

Leu Val Ile Pro Cys Arg Val Thr Ser Pro Asn Ile Thr Val Thr Leu
 50 55 60

Lys Lys Phe Pro Leu Asp Thr Leu Ile Pro Asp Gly Lys Arg Ile Ile
 65 70 75 80

Trp Asp Ser Arg Lys Gly Phe Ile Ile Ser Asn Ala Thr Tyr Lys Glu
 85 90 95

Ile Gly Leu Leu Thr Cys Glu Ala Thr Val Asn Gly His Leu Tyr Lys
 100 105 110

Thr Asn Tyr Leu Thr His Arg Gln Thr Asn Thr Ile Ile Asp Val Gln
 115 120 125

Ile Ser Thr Pro Arg Pro Val Lys Leu Leu Arg Gly His Thr Leu Val
 130 135 140

Leu Asn Cys Thr Ala Thr Thr Pro Leu Asn Thr Arg Val Gln Met Thr
 145 150 155 160

Trp Ser Tyr Pro Asp Glu Lys Asn Lys Arg Ala Ser Val Arg Arg Arg
 165 170 175

Ile Asp Gln Ser Asn Ser His Ala Asn Ile Phe Tyr Ser Val Leu Thr
 180 185 190

Ile Asp Lys Met Gln Asn Lys Asp Lys Gly Leu Tyr Thr Cys Arg Val
 195 200 205

Arg Ser Gly Pro Ser Phe Lys Ser Val Asn Thr Ser Val His Ile Tyr
 210 215 220

Asp Lys Ala Gly Pro Gly Glu Pro Lys Ser Cys Asp Lys Thr His Thr
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Cys Pro Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe

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tgt ctg ctt ctc aca gga tct agt tca ggt tca aaa tta aaa gat cct	96
Cys Leu Leu Leu Thr Gly Ser Ser Ser Gly Ser Lys Leu Lys Asp Pro	
20 25 30	

gaa ctg agt tta aaa ggc acc cag cac atc atg caa gca ggc cag aca	144
Glu Leu Ser Leu Lys Gly Thr Gln His Ile Met Gln Ala Gly Gln Thr	
35 40 45	

ctg cat ctc caa tgc agg ggg gaa gca gcc cat aaa tgg tct ttg cct	192
Leu His Leu Gln Cys Arg Gly Glu Ala Ala His Lys Trp Ser Leu Pro	
50 55 60	

gaa atg gtg agt aag gaa agc gaa agg ctg agc ata act aaa tct gcc	240
Glu Met Val Ser Lys Glu Ser Glu Arg Leu Ser Ile Thr Lys Ser Ala	
65 70 75 80	

tgt gga aga aat ggc aaa caa ttc tgc agt act tta acc ttg aac aca	288
Cys Gly Arg Asn Gly Lys Gln Phe Cys Ser Thr Leu Thr Leu Asn Thr	
85 90 95	

gct caa gca aac cac act ggc ttc tac agc tgc aaa tat cta gct gta	336
Ala Gln Ala Asn His Thr Gly Phe Tyr Ser Cys Lys Tyr Leu Ala Val	
100 105 110	

cct act tca aag aag aag gaa aca gaa tct gca atc tat ata ttt att	384
Pro Thr Ser Lys Lys Lys Glu Thr Glu Ser Ala Ile Tyr Ile Phe Ile	
115 120 125	

agt gat aca ggt aga cct ttc gta gag atg tac agt gaa atc ccc gaa	432
Ser Asp Thr Gly Arg Pro Phe Val Glu Met Tyr Ser Glu Ile Pro Glu	
130 135 140	

att ata cac atg act gaa gga agg gag ctc gtc att ccc tgc cgg gtt	480
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Ile	Ile	His	Met	Thr	Glu	Gly	Arg	Glu	Leu	Val	Ile	Pro	Cys	Arg	Val	
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Thr	Ser	Pro	Asn	Ile	Thr	Val	Thr	Leu	Lys	Lys	Phe	Pro	Leu	Asp	Thr	
				165				170						175		
ttg	atc	cct	gat	gga	aaa	cgc	ata	atc	tgg	gac	agt	aga	aag	ggc	ttc	576
Leu	Ile	Pro	Asp	Gly	Lys	Arg	Ile	Ile	Trp	Asp	Ser	Arg	Lys	Gly	Phe	
			180				185						190			
atc	ata	tca	aat	gca	acg	tac	aaa	gaa	ata	ggg	ctt	ctg	acc	tgt	gaa	624
Ile	Ile	Ser	Asn	Ala	Thr	Tyr	Lys	Glu	Ile	Gly	Leu	Leu	Thr	Cys	Glu	
		195					200					205				
gca	aca	gtc	aat	ggg	cat	ttg	tat	aag	aca	aac	tat	ctc	aca	cat	cga	672
Ala	Thr	Val	Asn	Gly	His	Leu	Tyr	Lys	Thr	Asn	Tyr	Leu	Thr	His	Arg	
	210					215					220					
caa	acc	aat	aca	atc	ata	gat	gtc	caa	ata	agc	aca	cca	cgc	cca	gtc	720
Gln	Thr	Asn	Thr	Ile	Ile	Asp	Val	Gln	Ile	Ser	Thr	Pro	Arg	Pro	Val	
225				230				235						240		
aaa	tta	ctt	aga	ggc	cat	act	ctt	gtc	ctc	aat	tgt	act	gct	acc	act	768
Lys	Leu	Leu	Arg	Gly	His	Thr	Leu	Val	Leu	Asn	Cys	Thr	Ala	Thr	Thr	
			245				250						255			
ccc	ttg	aac	acg	aga	gtt	caa	atg	acc	tgg	agt	tac	cct	gat	gaa	aaa	816
Pro	Leu	Asn	Thr	Arg	Val	Gln	Met	Thr	Trp	Ser	Tyr	Pro	Asp	Glu	Lys	
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aat	aag	aac	gct	tcc	gta	agg	cga	cga	att	gac	caa	agc	aat	tcc	cat	864
Asn	Lys	Asn	Ala	Ser	Val	Arg	Arg	Arg	Ile	Asp	Gln	Ser	Asn	Ser	His	
		275					280					285				
gcc	aac	ata	ttc	tac	agt	gtt	ctt	act	att	gac	aaa	atg	cag	aac	aaa	912
Ala	Asn	Ile	Phe	Tyr	Ser	Val	Leu	Thr	Ile	Asp	Lys	Met	Gln	Asn	Lys	
	290					295					300					
gac	aaa	gga	ctt	tat	act	tgt	cgt	gta	agg	agt	gga	cca	tca	ttc	aaa	960
Asp	Lys	Gly	Leu	Tyr	Thr	Cys	Arg	Val	Arg	Ser	Gly	Pro	Ser	Phe	Lys	
305				310				315						320		
tct	gtt	aac	acc	tca	gtg	cat	ata	tat	gat	aaa	gca	ggc	ccg	ggc	gag	1008
Ser	Val	Asn	Thr	Ser	Val	His	Ile	Tyr	Asp	Lys	Ala	Gly	Pro	Gly	Glu	
			325					330						335		
ccc	aaa	tct	tgt	gac	aaa	act	cac	aca	tgc	cca	ccg	tgc	cca	gca	cct	1056
Pro	Lys	Ser	Cys	Asp	Lys	Thr	His	Thr	Cys	Pro	Pro	Cys	Pro	Ala	Pro	
			340				345						350			
gaa	ctc	ctg	ggg	gga	ccg	tca	gtc	ttc	ctc	ttc	ccc	cca	aaa	ccc	aag	1104
Glu	Leu	Leu	Gly	Gly	Pro	Ser	Val	Phe	Leu	Phe	Pro	Pro	Lys	Pro	Lys	
		355					360					365				
gac	acc	ctc	atg	atc	tcc	cgg	acc	cct	gag	gtc	aca	tgc	gtg	gtg	gtg	1152

Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val	
370 375 380	
gac gtg agc cac gaa gac cct gag gtc aag ttc aac tgg tac gtg gac	1200
Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp	
385 390 395 400	
ggc gtg gag gtg cat aat gcc aag aca aag ccg cgg gag gag cag tac	1248
Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr	
405 410 415	
aac agc acg tac cgt gtg gtc agc gtc ctc acc gtc ctg cac cag gac	1296
Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp	
420 425 430	
tgg ctg aat ggc aag gag tac aag tgc aag gtc tcc aac aaa gcc ctc	1344
Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu	
435 440 445	
cca gcc ccc atc gag aaa acc atc tcc aaa gcc aaa ggg cag ccc cga	1392
Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg	
450 455 460	
gaa cca cag gtg tac acc ctg ccc cca tcc cgg gat gag ctg acc aag	1440
Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys	
465 470 475 480	
aac cag gtc agc ctg acc tgc ctg gtc aaa ggc ttc tat ccc agc gac	1488
Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp	
485 490 495	
atc gcc gtg gag tgg gag agc aat ggg cag ccg gag aac aac tac aag	1536
Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys	
500 505 510	
acc acg cct ccc gtg ctg gac tcc gac ggc tcc ttc ttc ctc tac agc	1584
Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser	
515 520 525	
aag ctc acc gtg gac aag agc agg tgg cag cag ggg aac gtc ttc tca	1632
Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser	
530 535 540	
tgc tcc gtg atg cat gag gct ctg cac aac cac tac acg cag aag agc	1680
Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser	
545 550 555 560	
ctc tcc ctg tct ccg ggt aaa tga	1704
Leu Ser Leu Ser Pro Gly Lys	
565	

<210> 20

<211> 567

<212> PRT

<213> Artificial

<400> 20

Met Val Ser Tyr Trp Asp Thr Gly Val Leu Leu Cys Ala Leu Leu Ser
1 5 10 15

Cys Leu Leu Leu Thr Gly Ser Ser Ser Gly Ser Lys Leu Lys Asp Pro
20 25 30

Glu Leu Ser Leu Lys Gly Thr Gln His Ile Met Gln Ala Gly Gln Thr
35 40 45

Leu His Leu Gln Cys Arg Gly Glu Ala Ala His Lys Trp Ser Leu Pro
50 55 60

Glu Met Val Ser Lys Glu Ser Glu Arg Leu Ser Ile Thr Lys Ser Ala
65 70 75 80

Cys Gly Arg Asn Gly Lys Gln Phe Cys Ser Thr Leu Thr Leu Asn Thr
85 90 95

Ala Gln Ala Asn His Thr Gly Phe Tyr Ser Cys Lys Tyr Leu Ala Val
100 105 110

Pro Thr Ser Lys Lys Lys Glu Thr Glu Ser Ala Ile Tyr Ile Phe Ile
115 120 125

Ser Asp Thr Gly Arg Pro Phe Val Glu Met Tyr Ser Glu Ile Pro Glu
130 135 140

Ile Ile His Met Thr Glu Gly Arg Glu Leu Val Ile Pro Cys Arg Val
145 150 155 160

Thr Ser Pro Asn Ile Thr Val Thr Leu Lys Lys Phe Pro Leu Asp Thr
165 170 175

Leu Ile Pro Asp Gly Lys Arg Ile Ile Trp Asp Ser Arg Lys Gly Phe
180 185 190

Ile Ile Ser Asn Ala Thr Tyr Lys Glu Ile Gly Leu Leu Thr Cys Glu

195					200					205					
Ala	Thr	Val	Asn	Gly	His	Leu	Tyr	Lys	Thr	Asn	Tyr	Leu	Thr	His	Arg
210						215					220				
Gln	Thr	Asn	Thr	Ile	Ile	Asp	Val	Gln	Ile	Ser	Thr	Pro	Arg	Pro	Val
225					230					235					240
Lys	Leu	Leu	Arg	Gly	His	Thr	Leu	Val	Leu	Asn	Cys	Thr	Ala	Thr	Thr
				245					250					255	
Pro	Leu	Asn	Thr	Arg	Val	Gln	Met	Thr	Trp	Ser	Tyr	Pro	Asp	Glu	Lys
			260					265					270		
Asn	Lys	Asn	Ala	Ser	Val	Arg	Arg	Arg	Ile	Asp	Gln	Ser	Asn	Ser	His
		275					280					285			
Ala	Asn	Ile	Phe	Tyr	Ser	Val	Leu	Thr	Ile	Asp	Lys	Met	Gln	Asn	Lys
	290					295					300				
Asp	Lys	Gly	Leu	Tyr	Thr	Cys	Arg	Val	Arg	Ser	Gly	Pro	Ser	Phe	Lys
305					310					315					320
Ser	Val	Asn	Thr	Ser	Val	His	Ile	Tyr	Asp	Lys	Ala	Gly	Pro	Gly	Glu
				325					330					335	
Pro	Lys	Ser	Cys	Asp	Lys	Thr	His	Thr	Cys	Pro	Pro	Cys	Pro	Ala	Pro
			340					345					350		
Glu	Leu	Leu	Gly	Gly	Pro	Ser	Val	Phe	Leu	Phe	Pro	Pro	Lys	Pro	Lys
		355					360					365			
Asp	Thr	Leu	Met	Ile	Ser	Arg	Thr	Pro	Glu	Val	Thr	Cys	Val	Val	Val
	370					375					380				
Asp	Val	Ser	His	Glu	Asp	Pro	Glu	Val	Lys	Phe	Asn	Trp	Tyr	Val	Asp
385					390					395					400
Gly	Val	Glu	Val	His	Asn	Ala	Lys	Thr	Lys	Pro	Arg	Glu	Glu	Gln	Tyr
				405					410					415	
Asn	Ser	Thr	Tyr	Arg	Val	Val	Ser	Val	Leu	Thr	Val	Leu	His	Gln	Asp
			420					425					430		

Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu
 435 440 445

Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg
 450 455 460

Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys
 465 470 475 480

Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp
 485 490 495

Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys
 500 505 510

Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser
 515 520 525

Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser
 530 535 540

Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser
 545 550 555 560

Leu Ser Leu Ser Pro Gly Lys
 565

<210> 21

<211> 1453

<212> DNA

<213> Artificial

<220>

<223> Flt 1 Receptor

<220>

<221> CDS

<222> (69)..(1442)

<400> 21
aagcttgggc tgcaggtcga tcgactctag aggatcgatc cccgggcgag ctcgaattcg 60

caaccacc atg gtc agc tac tgg gac acc ggg gtc ctg ctg tgc gcg ctg 110
Met Val Ser Tyr Trp Asp Thr Gly Val Leu Leu Cys Ala Leu
1 5 10

ctc agc tgt ctg ctt ctc aca gga tct agt tcc gga ggt aga cct ttc 158
Leu Ser Cys Leu Leu Leu Thr Gly Ser Ser Ser Gly Gly Arg Pro Phe
15 20 25 30

gta gag atg tac agt gaa atc ccc gaa att ata cac atg act gaa gga 206
Val Glu Met Tyr Ser Glu Ile Pro Glu Ile Ile His Met Thr Glu Gly
35 40 45

agg gag ctc gtc att ccc tgc cgg gtt acg tca cct aac atc act gtt 254
Arg Glu Leu Val Ile Pro Cys Arg Val Thr Ser Pro Asn Ile Thr Val
50 55 60

act tta aaa aag ttt cca ctt gac act ttg atc cct gat gga aaa cgc 302
Thr Leu Lys Lys Phe Pro Leu Asp Thr Leu Ile Pro Asp Gly Lys Arg
65 70 75

ata atc tgg gac agt aga aag ggc ttc atc ata tca aat gca acg tac 350
Ile Ile Trp Asp Ser Arg Lys Gly Phe Ile Ile Ser Asn Ala Thr Tyr
80 85 90

aaa gaa ata ggg ctt ctg acc tgt gaa gca aca gtc aat ggg cat ttg 398
Lys Glu Ile Gly Leu Leu Thr Cys Glu Ala Thr Val Asn Gly His Leu
95 100 105 110

tat aag aca aac tat ctc aca cat cga caa acc aat aca atc ata gat 446
Tyr Lys Thr Asn Tyr Leu Thr His Arg Gln Thr Asn Thr Ile Ile Asp
115 120 125

gtg gtt ctg agt ccg tct cat gga att gaa cta tct gtt gga gaa aag 494
Val Val Leu Ser Pro Ser His Gly Ile Glu Leu Ser Val Gly Glu Lys
130 135 140

ctt gtc tta aat tgt aca gca aga act gaa cta aat gtg ggg att gac 542
Leu Val Leu Asn Cys Thr Ala Arg Thr Glu Leu Asn Val Gly Ile Asp
145 150 155

ttc aac tgg gaa tac cct tct tcg aag cat cag cat aag aaa ctt gta 590
Phe Asn Trp Glu Tyr Pro Ser Ser Lys His Gln His Lys Lys Leu Val
160 165 170

aac cga gac cta aaa acc cag tct ggg agt gag atg aag aaa ttt ttg 638
Asn Arg Asp Leu Lys Thr Gln Ser Gly Ser Glu Met Lys Lys Phe Leu
175 180 185 190

agc acc tta act ata gat ggt gta acc cgg agt gac caa gga ttg tac 686
Ser Thr Leu Thr Ile Asp Gly Val Thr Arg Ser Asp Gln Gly Leu Tyr
195 200 205

acc tgt gca gca tcc agt ggg ctg atg acc aag aag aac agc aca ttt 734
Thr Cys Ala Ala Ser Ser Gly Leu Met Thr Lys Lys Asn Ser Thr Phe
210 215 220

gtc agg gtc cat gaa aag ggc ccg ggc gac aaa act cac aca tgc cca	782
Val Arg Val His Glu Lys Gly Pro Gly Asp Lys Thr His Thr Cys Pro	
225 230 235	
ccg tgc cca gca cct gaa ctc ctg ggg gga ccg tca gtc ttc ctc ttc	830
Pro Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe	
240 245 250	
ccc cca aaa ccc aag gac acc ctc atg atc tcc cgg acc cct gag gtc	878
Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val	
255 260 265 270	
aca tgc gtg gtg gtg gac gtg agc cac gaa gac cct gag gtc aag ttc	926
Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe	
275 280 285	
aac tgg tac gtg gac ggc gtg gag gtg cat aat gcc aag aca aag ccg	974
Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro	
290 295 300	
cgg gag gag cag tac aac agc acg tac cgt gtg gtc agc gtc ctc acc	1022
Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr	
305 310 315	
gtc ctg cac cag gac tgg ctg aat ggc aag gag tac aag tgc aag gtc	1070
Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val	
320 325 330	
tcc aac aaa gcc ctc cca gcc ccc atc gag aaa acc atc tcc aaa gcc	1118
Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala	
335 340 345 350	
aaa ggg cag ccc cga gaa cca cag gtg tac acc ctg ccc cca tcc cgg	1166
Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg	
355 360 365	
gat gag ctg acc aag aac cag gtc agc ctg acc tgc ctg gtc aaa ggc	1214
Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly	
370 375 380	
ttc tat ccc agc gac atc gcc gtg gag tgg gag agc aat ggg cag ccg	1262
Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro	
385 390 395	
gag aac aac tac aag acc acg cct ccc gtg ctg gac tcc gac ggc tcc	1310
Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser	
400 405 410	
ttc ttc ctc tat agc aag ctc acc gtg gac aag agc agg tgg cag cag	1358
Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln	
415 420 425 430	
ggg aac gtc ttc tca tgc tcc gtg atg cat gag gct ctg cac aac cac	1406
Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His	
435 440 445	
tac acg cag aag agc ctc tcc ctg tct ccg ggt aaa tgagcggccg c	1453
Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys	

450

455

<210> 22

<211> 458

<212> PRT

<213> Artificial

<400> 22

Met Val Ser Tyr Trp Asp Thr Gly Val Leu Leu Cys Ala Leu Leu Ser
1 5 10 15

Cys Leu Leu Leu Thr Gly Ser Ser Ser Gly Gly Arg Pro Phe Val Glu
20 25 30

Met Tyr Ser Glu Ile Pro Glu Ile Ile His Met Thr Glu Gly Arg Glu
35 40 45

Leu Val Ile Pro Cys Arg Val Thr Ser Pro Asn Ile Thr Val Thr Leu
50 55 60

Lys Lys Phe Pro Leu Asp Thr Leu Ile Pro Asp Gly Lys Arg Ile Ile
65 70 75 80

Trp Asp Ser Arg Lys Gly Phe Ile Ile Ser Asn Ala Thr Tyr Lys Glu
85 90 95

Ile Gly Leu Leu Thr Cys Glu Ala Thr Val Asn Gly His Leu Tyr Lys
100 105 110

Thr Asn Tyr Leu Thr His Arg Gln Thr Asn Thr Ile Ile Asp Val Val
115 120 125

Leu Ser Pro Ser His Gly Ile Glu Leu Ser Val Gly Glu Lys Leu Val
130 135 140

Leu Asn Cys Thr Ala Arg Thr Glu Leu Asn Val Gly Ile Asp Phe Asn
145 150 155 160

Trp Glu Tyr Pro Ser Ser Lys His Gln His Lys Lys Leu Val Asn Arg
165 170 175

Asp	Leu	Lys	Thr	Gln	Ser	Gly	Ser	Glu	Met	Lys	Lys	Phe	Leu	Ser	Thr	180	185	190
Leu	Thr	Ile	Asp	Gly	Val	Thr	Arg	Ser	Asp	Gln	Gly	Leu	Tyr	Thr	Cys	195	200	205
Ala	Ala	Ser	Ser	Gly	Leu	Met	Thr	Lys	Lys	Asn	Ser	Thr	Phe	Val	Arg	210	215	220
Val	His	Glu	Lys	Gly	Pro	Gly	Asp	Lys	Thr	His	Thr	Cys	Pro	Pro	Cys	225	230	235
Pro	Ala	Pro	Glu	Leu	Leu	Gly	Gly	Pro	Ser	Val	Phe	Leu	Phe	Pro	Pro	245	250	255
Lys	Pro	Lys	Asp	Thr	Leu	Met	Ile	Ser	Arg	Thr	Pro	Glu	Val	Thr	Cys	260	265	270
Val	Val	Val	Asp	Val	Ser	His	Glu	Asp	Pro	Glu	Val	Lys	Phe	Asn	Trp	275	280	285
Tyr	Val	Asp	Gly	Val	Glu	Val	His	Asn	Ala	Lys	Thr	Lys	Pro	Arg	Glu	290	295	300
Glu	Gln	Tyr	Asn	Ser	Thr	Tyr	Arg	Val	Val	Ser	Val	Leu	Thr	Val	Leu	305	310	315
His	Gln	Asp	Trp	Leu	Asn	Gly	Lys	Glu	Tyr	Lys	Cys	Lys	Val	Ser	Asn	325	330	335
Lys	Ala	Leu	Pro	Ala	Pro	Ile	Glu	Lys	Thr	Ile	Ser	Lys	Ala	Lys	Gly	340	345	350
Gln	Pro	Arg	Glu	Pro	Gln	Val	Tyr	Thr	Leu	Pro	Pro	Ser	Arg	Asp	Glu	355	360	365
Leu	Thr	Lys	Asn	Gln	Val	Ser	Leu	Thr	Cys	Leu	Val	Lys	Gly	Phe	Tyr	370	375	380
Pro	Ser	Asp	Ile	Ala	Val	Glu	Trp	Glu	Ser	Asn	Gly	Gln	Pro	Glu	Asn	385	390	395
Asn	Tyr	Lys	Thr	Thr	Pro	Pro	Val	Leu	Asp	Ser	Asp	Gly	Ser	Phe	Phe	405	410	415

Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn
420 425 430

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
435 440 445

Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
450 455

<210> 23

<211> 1444

<212> DNA

<213> Artificial

<220>

<223> Flt 1 Receptor

<220>

<221> CDS

<222> (69)..(1436)

<400> 23

aagcttggggc tgcagggtcga tgcactctag aggatcgatc cccggggcgag ctcgaattcg 60

caaccacc atg gtc agc tac tgg gac acc ggg gtc ctg ctg tgc gcg ctg 110

Met Val Ser Tyr Trp Asp Thr Gly Val Leu Leu Cys Ala Leu
1 5 10

ctc agc tgt ctg ctt ctc aca gga tct agt tcc gga ggt aga cct ttc 158

Leu Ser Cys Leu Leu Leu Thr Gly Ser Ser Ser Gly Gly Arg Pro Phe
15 20 25 30

gta gag atg tac agt gaa atc ccc gaa att ata cac atg act gaa gga 206

Val Glu Met Tyr Ser Glu Ile Pro Glu Ile Ile His Met Thr Glu Gly
35 40 45

agg gag ctc gtc att ccc tgc cgg gtt acg tca cct aac atc act gtt 254

Arg Glu Leu Val Ile Pro Cys Arg Val Thr Ser Pro Asn Ile Thr Val
50 55 60

act tta aaa aag ttt cca ctt gac act ttg atc cct gat gga aaa cgc 302

Thr Leu Lys Lys Phe Pro Leu Asp Thr Leu Ile Pro Asp Gly Lys Arg
65 70 75

ata atc tgg gac agt aga aag ggc ttc atc ata tca aat gca acg tac	350
Ile Ile Trp Asp Ser Arg Lys Gly Phe Ile Ile Ser Asn Ala Thr Tyr	
80 85 90	
aaa gaa ata ggg ctt ctg acc tgt gaa gca aca gtc aat ggg cat ttg	398
Lys Glu Ile Gly Leu Leu Thr Cys Glu Ala Thr Val Asn Gly His Leu	
95 100 105 110	
tat aag aca aac tat ctc aca cat cga caa acc aat aca atc ata gat	446
Tyr Lys Thr Asn Tyr Leu Thr His Arg Gln Thr Asn Thr Ile Ile Asp	
115 120 125	
atc cag ctg ttg ccc agg aag tcg ctg gag ctg ctg gta ggg gag aag	494
Ile Gln Leu Leu Pro Arg Lys Ser Leu Glu Leu Leu Val Gly Glu Lys	
130 135 140	
ctg gtc ctc aac tgc acc gtg tgg gct gag ttt aac tca ggt gtc acc	542
Leu Val Leu Asn Cys Thr Val Trp Ala Glu Phe Asn Ser Gly Val Thr	
145 150 155	
ttt gac tgg gac tac cca ggg aag cag gca gag cgg ggt aag tgg gtg	590
Phe Asp Trp Asp Tyr Pro Gly Lys Gln Ala Glu Arg Gly Lys Trp Val	
160 165 170	
ccc gag cga cgc tcc caa cag acc cac aca gaa ctc tcc agc atc ctg	638
Pro Glu Arg Arg Ser Gln Gln Thr His Thr Glu Leu Ser Ser Ile Leu	
175 180 185 190	
acc atc cac aac gtc agc cag cac gac ctg ggc tcg tat gtg tgc aag	686
Thr Ile His Asn Val Ser Gln His Asp Leu Gly Ser Tyr Val Cys Lys	
195 200 205	
gcc aac aac ggc atc cag cga ttt cgg gag agc acc gag gtc att gtg	734
Ala Asn Asn Gly Ile Gln Arg Phe Arg Glu Ser Thr Glu Val Ile Val	
210 215 220	
cat gaa aat ggc ccg ggc gac aaa act cac aca tgc cca ccg tgc cca	782
His Glu Asn Gly Pro Gly Asp Lys Thr His Thr Cys Pro Pro Cys Pro	
225 230 235	
gca cct gaa ctc ctg ggg gga ccg tca gtc ttc ctc ttc ccc cca aaa	830
Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys	
240 245 250	
ccc aag gac acc ctc atg atc tcc cgg acc cct gag gtc aca tgc gtg	878
Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val	
255 260 265 270	
gtg gtg gac gtg agc cac gaa gac cct gag gtc aag ttc aac tgg tac	926
Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr	
275 280 285	
gtg gac ggc gtg gag gtg cat aat gcc aag aca aag ccg cgg gag gag	974
Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu	
290 295 300	
cag tac aac agc acg tac cgt gtg gtc agc gtc ctc acc gtc ctg cac	1022
Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His	

305	310	315	
cag gac tgg ctg aat ggc aag gag tac aag tgc aag gtc tcc aac aaa Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys 320 325 330			1070
gcc ctc cca gcc ccc atc gag aaa acc atc tcc aaa gcc aaa ggg cag Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln 335 340 345 350			1118
ccc cga gaa cca cag gtg tac acc ctg ccc cca tcc cgg gat gag ctg Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu 355 360 365			1166
acc aag aac cag gtc agc ctg acc tgc ctg gtc aaa ggc ttc tat ccc Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro 370 375 380			1214
agc gac atc gcc gtg gag tgg gag agc aat ggg cag ccg gag aac aac Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn 385 390 395			1262
tac aag acc acg cct ccc gtg ctg gac tcc gac ggc tcc ttc ttc ctc Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu 400 405 410			1310
tat agc aag ctc acc gtg gac aag agc agg tgg cag cag ggg aac gtc Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val 415 420 425 430			1358
ttc tca tgc tcc gtg atg cat gag gct ctg cac aac cac tac acg cag Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln 435 440 445			1406
aag agc ctc tcc ctg tct ccg ggt aaa tga gcggccgc Lys Ser Leu Ser Leu Ser Pro Gly Lys 450 455			1444

<210> 24

<211> 455

<212> PRT

<213> Artificial

<400> 24

Met	Val	Ser	Tyr	Trp	Asp	Thr	Gly	Val	Leu	Leu	Cys	Ala	Leu	Leu	Ser
1				5					10					15	

Cys	Leu	Leu	Leu	Thr	Gly	Ser	Ser	Ser	Gly	Gly	Arg	Pro	Phe	Val	Glu
			20					25					30		

Met	Tyr	Ser	Glu	Ile	Pro	Glu	Ile	Ile	His	Met	Thr	Glu	Gly	Arg	Glu
		35					40					45			
Leu	Val	Ile	Pro	Cys	Arg	Val	Thr	Ser	Pro	Asn	Ile	Thr	Val	Thr	Leu
	50					55					60				
Lys	Lys	Phe	Pro	Leu	Asp	Thr	Leu	Ile	Pro	Asp	Gly	Lys	Arg	Ile	Ile
65					70					75					80
Trp	Asp	Ser	Arg	Lys	Gly	Phe	Ile	Ile	Ser	Asn	Ala	Thr	Tyr	Lys	Glu
				85					90					95	
Ile	Gly	Leu	Leu	Thr	Cys	Glu	Ala	Thr	Val	Asn	Gly	His	Leu	Tyr	Lys
			100					105					110		
Thr	Asn	Tyr	Leu	Thr	His	Arg	Gln	Thr	Asn	Thr	Ile	Ile	Asp	Ile	Gln
		115					120					125			
Leu	Leu	Pro	Arg	Lys	Ser	Leu	Glu	Leu	Leu	Val	Gly	Glu	Lys	Leu	Val
		130				135					140				
Leu	Asn	Cys	Thr	Val	Trp	Ala	Glu	Phe	Asn	Ser	Gly	Val	Thr	Phe	Asp
145					150					155					160
Trp	Asp	Tyr	Pro	Gly	Lys	Gln	Ala	Glu	Arg	Gly	Lys	Trp	Val	Pro	Glu
				165					170					175	
Arg	Arg	Ser	Gln	Gln	Thr	His	Thr	Glu	Leu	Ser	Ser	Ile	Leu	Thr	Ile
			180					185					190		
His	Asn	Val	Ser	Gln	His	Asp	Leu	Gly	Ser	Tyr	Val	Cys	Lys	Ala	Asn
		195					200					205			
Asn	Gly	Ile	Gln	Arg	Phe	Arg	Glu	Ser	Thr	Glu	Val	Ile	Val	His	Glu
		210				215					220				
Asn	Gly	Pro	Gly	Asp	Lys	Thr	His	Thr	Cys	Pro	Pro	Cys	Pro	Ala	Pro
225					230					235					240
Glu	Leu	Leu	Gly	Gly	Pro	Ser	Val	Phe	Leu	Phe	Pro	Pro	Lys	Pro	Lys
				245					250					255	
Asp	Thr	Leu	Met	Ile	Ser	Arg	Thr	Pro	Glu	Val	Thr	Cys	Val	Val	Val
			260					265					270		

Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp
 275 280 285

Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr
 290 295 300

Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp
 305 310 315 320

Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu
 325 330 335

Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg
 340 345 350

Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys
 355 360 365

Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp
 370 375 380

Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys
 385 390 395 400

Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser
 405 410 415

Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser
 420 425 430

Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser
 435 440 445

Leu Ser Leu Ser Pro Gly Lys
 450 455

<210> 25

<211> 1377

<212> DNA

<213> Artificial

<220>

<223> Flt 1 Receptor

<220>

<221> CDS

<222> (1)..(1377)

<400> 25

atg	gtc	agc	tac	tgg	gac	acc	ggg	gtc	ctg	ctg	tgc	gcg	ctg	ctc	agc	48
Met	Val	Ser	Tyr	Trp	Asp	Thr	Gly	Val	Leu	Leu	Cys	Ala	Leu	Leu	Ser	
1				5				10						15		

tgt	ctg	ctt	ctc	aca	gga	tct	agt	tcc	gga	agt	gat	acc	ggg	aga	cct	96
Cys	Leu	Leu	Leu	Thr	Gly	Ser	Ser	Ser	Gly	Ser	Asp	Thr	Gly	Arg	Pro	
			20					25					30			

ttc	gta	gag	atg	tac	agt	gaa	atc	ccc	gaa	att	ata	cac	atg	act	gaa	144
Phe	Val	Glu	Met	Tyr	Ser	Glu	Ile	Pro	Glu	Ile	Ile	His	Met	Thr	Glu	
		35					40					45				

gga	agg	gag	ctc	gtc	att	ccc	tgc	cgg	gtt	acg	tca	cct	aac	atc	act	192
Gly	Arg	Glu	Leu	Val	Ile	Pro	Cys	Arg	Val	Thr	Ser	Pro	Asn	Ile	Thr	
	50					55				60						

gtt	act	tta	aaa	aag	ttt	cca	ctt	gac	act	ttg	atc	cct	gat	gga	aaa	240
Val	Thr	Leu	Lys	Lys	Phe	Pro	Leu	Asp	Thr	Leu	Ile	Pro	Asp	Gly	Lys	
65					70					75					80	

cgc	ata	atc	tgg	gac	agt	aga	aag	ggc	ttc	atc	ata	tca	aat	gca	acg	288
Arg	Ile	Ile	Trp	Asp	Ser	Arg	Lys	Gly	Phe	Ile	Ile	Ser	Asn	Ala	Thr	
			85					90						95		

tac	aaa	gaa	ata	ggg	ctt	ctg	acc	tgt	gaa	gca	aca	gtc	aat	ggg	cat	336
Tyr	Lys	Glu	Ile	Gly	Leu	Leu	Thr	Cys	Glu	Ala	Thr	Val	Asn	Gly	His	
			100					105					110			

ttg	tat	aag	aca	aac	tat	ctc	aca	cat	cga	caa	acc	aat	aca	atc	ata	384
Leu	Tyr	Lys	Thr	Asn	Tyr	Leu	Thr	His	Arg	Gln	Thr	Asn	Thr	Ile	Ile	
		115					120					125				

gat	gtg	gtt	ctg	agt	ccg	tct	cat	gga	att	gaa	cta	tct	gtt	gga	gaa	432
Asp	Val	Val	Leu	Ser	Pro	Ser	His	Gly	Ile	Glu	Leu	Ser	Val	Gly	Glu	
	130					135				140						

aag	ctt	gtc	tta	aat	tgt	aca	gca	aga	act	gaa	cta	aat	gtg	ggg	att	480
Lys	Leu	Val	Leu	Asn	Cys	Thr	Ala	Arg	Thr	Glu	Leu	Asn	Val	Gly	Ile	
145					150					155					160	

gac	ttc	aac	tgg	gaa	tac	cct	tct	tcg	aag	cat	cag	cat	aag	aaa	ctt	528
Asp	Phe	Asn	Trp	Glu	Tyr	Pro	Ser	Ser	Lys	His	Gln	His	Lys	Lys	Leu	
				165					170						175	

gta aac cga gac cta aaa acc cag tct ggg agt gag atg aag aaa ttt	576
Val Asn Arg Asp Leu Lys Thr Gln Ser Gly Ser Glu Met Lys Lys Phe	
180 185 190	
ttg agc acc tta act ata gat ggt gta acc cgg agt gac caa gga ttg	624
Leu Ser Thr Leu Thr Ile Asp Gly Val Thr Arg Ser Asp Gln Gly Leu	
195 200 205	
tac acc tgt gca gca tcc agt ggg ctg atg acc aag aag aac agc aca	672
Tyr Thr Cys Ala Ala Ser Ser Gly Leu Met Thr Lys Lys Asn Ser Thr	
210 215 220	
ttt gtc agg gtc cat gaa aag gac aaa act cac aca tgc cca ccg tgc	720
Phe Val Arg Val His Glu Lys Asp Lys Thr His Thr Cys Pro Pro Cys	
225 230 235 240	
cca gca cct gaa ctc ctg ggg gga ccg tca gtc ttc ctc ttc ccc cca	768
Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro	
245 250 255	
aaa ccc aag gac acc ctc atg atc tcc cgg acc cct gag gtc aca tgc	816
Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys	
260 265 270	
gtg gtg gtg gac gtg agc cac gaa gac cct gag gtc aag ttc aac tgg	864
Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp	
275 280 285	
tac gtg gac ggc gtg gag gtg cat aat gcc aag aca aag ccg cgg gag	912
Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu	
290 295 300	
gag cag tac aac agc acg tac cgt gtg gtc agc gtc ctc acc gtc ctg	960
Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu	
305 310 315 320	
cac cag gac tgg ctg aat ggc aag gag tac aag tgc aag gtc tcc aac	1008
His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn	
325 330 335	
aaa gcc ctc cca gcc ccc atc gag aaa acc atc tcc aaa gcc aaa ggg	1056
Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly	
340 345 350	
cag ccc cga gaa cca cag gtg tac acc ctg ccc cca tcc cgg gat gag	1104
Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu	
355 360 365	
ctg acc aag aac cag gtc agc ctg acc tgc ctg gtc aaa ggc ttc tat	1152
Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr	
370 375 380	
ccc agc gac atc gcc gtg gag tgg gag agc aat ggg cag ccg gag aac	1200
Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn	
385 390 395 400	

aac tac aag acc acg cct ccc gtg ctg gac tcc gac ggc tcc ttc ttc	1248
Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe	
405 410 415	

ctc tac agc aag ctc acc gtg gac aag agc agg tgg cag cag ggg aac	1296
Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn	
420 425 430	

gtc ttc tca tgc tcc gtg atg cat gag gct ctg cac aac cac tac acg	1344
Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr	
435 440 445	

cag aag agc ctc tcc ctg tct ccg ggt aaa tga	1377
Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys	
450 455	

<210> 26

<211> 458

<212> PRT

<213> Artificial

<400> 26

Met Val Ser Tyr Trp Asp Thr Gly Val Leu Leu Cys Ala Leu Leu Ser
1 5 10 15

Cys Leu Leu Leu Thr Gly Ser Ser Ser Gly Ser Asp Thr Gly Arg Pro
20 25 30

Phe Val Glu Met Tyr Ser Glu Ile Pro Glu Ile Ile His Met Thr Glu
35 40 45

Gly Arg Glu Leu Val Ile Pro Cys Arg Val Thr Ser Pro Asn Ile Thr
50 55 60

Val Thr Leu Lys Lys Phe Pro Leu Asp Thr Leu Ile Pro Asp Gly Lys
65 70 75 80

Arg Ile Ile Trp Asp Ser Arg Lys Gly Phe Ile Ile Ser Asn Ala Thr
85 90 95

Tyr Lys Glu Ile Gly Leu Leu Thr Cys Glu Ala Thr Val Asn Gly His
100 105 110

Leu Tyr Lys Thr Asn Tyr Leu Thr His Arg Gln Thr Asn Thr Ile Ile
 115 120 125

Asp Val Val Leu Ser Pro Ser His Gly Ile Glu Leu Ser Val Gly Glu
 130 135 140

Lys Leu Val Leu Asn Cys Thr Ala Arg Thr Glu Leu Asn Val Gly Ile
 145 150 155 160

Asp Phe Asn Trp Glu Tyr Pro Ser Ser Lys His Gln His Lys Lys Leu
 165 170 175

Val Asn Arg Asp Leu Lys Thr Gln Ser Gly Ser Glu Met Lys Lys Phe
 180 185 190

Leu Ser Thr Leu Thr Ile Asp Gly Val Thr Arg Ser Asp Gln Gly Leu
 195 200 205

Tyr Thr Cys Ala Ala Ser Ser Gly Leu Met Thr Lys Lys Asn Ser Thr
 210 215 220

Phe Val Arg Val His Glu Lys Asp Lys Thr His Thr Cys Pro Pro Cys
 225 230 235 240

Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro
 245 250 255

Lys Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys
 260 265 270

Val Val Val Asp Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp
 275 280 285

Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu
 290 295 300

Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu
 305 310 315 320

His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn
 325 330 335

Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly
 340 345 350

Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu
 355 360 365

Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr
 370 375 380

Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn
 385 390 395 400

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe
 405 410 415

Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn
 420 425 430

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr
 435 440 445

Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys
 450 455

<210> 27

<211> 431

<212> PRT

<213> Artificial

<220>

<223> Peptide

<400> 27

Gly Arg Pro Phe Val Glu Met Tyr Ser Glu Ile Pro Glu Ile Ile His
 1 5 10 15

Met Thr Glu Gly Arg Glu Leu Val Ile Pro Cys Arg Val Thr Ser Pro
 20 25 30

Asn Ile Thr Val Thr Leu Lys Lys Phe Pro Leu Asp Thr Leu Ile Pro
 35 40 45

Asp Gly Lys Arg Ile Ile Trp Asp Ser Arg Lys Gly Phe Ile Ile Ser
 50 55 60

Asn	Ala	Thr	Tyr	Lys	Glu	Ile	Gly	Leu	Leu	Thr	Cys	Glu	Ala	Thr	Val	65	70	75	80
Asn	Gly	His	Leu	Tyr	Lys	Thr	Asn	Tyr	Leu	Thr	His	Arg	Gln	Thr	Asn	85	90	95	
Thr	Ile	Ile	Asp	Val	Val	Leu	Ser	Pro	Ser	His	Gly	Ile	Glu	Leu	Ser	100	105	110	
Val	Gly	Glu	Lys	Leu	Val	Leu	Asn	Cys	Thr	Ala	Arg	Thr	Glu	Leu	Asn	115	120	125	
Val	Gly	Ile	Asp	Phe	Asn	Trp	Glu	Tyr	Pro	Ser	Ser	Lys	His	Gln	His	130	135	140	
Lys	Lys	Leu	Val	Asn	Arg	Asp	Leu	Lys	Thr	Gln	Ser	Gly	Ser	Glu	Met	145	150	155	160
Lys	Lys	Phe	Leu	Ser	Thr	Leu	Thr	Ile	Asp	Gly	Val	Thr	Arg	Ser	Asp	165	170	175	
Gln	Gly	Leu	Tyr	Thr	Cys	Ala	Ala	Ser	Ser	Gly	Leu	Met	Thr	Lys	Lys	180	185	190	
Asn	Ser	Thr	Phe	Val	Arg	Val	His	Glu	Lys	Gly	Pro	Gly	Asp	Lys	Thr	195	200	205	
His	Thr	Cys	Pro	Pro	Cys	Pro	Ala	Pro	Glu	Leu	Leu	Gly	Gly	Pro	Ser	210	215	220	
Val	Phe	Leu	Phe	Pro	Pro	Lys	Pro	Lys	Asp	Thr	Leu	Met	Ile	Ser	Arg	225	230	235	240
Thr	Pro	Glu	Val	Thr	Cys	Val	Val	Val	Asp	Val	Ser	His	Glu	Asp	Pro	245	250	255	
Glu	Val	Lys	Phe	Asn	Trp	Tyr	Val	Asp	Gly	Val	Glu	Val	His	Asn	Ala	260	265	270	
Lys	Thr	Lys	Pro	Arg	Glu	Glu	Gln	Tyr	Asn	Ser	Thr	Tyr	Arg	Val	Val	275	280	285	
Ser	Val	Leu	Thr	Val	Leu	His	Gln	Asp	Trp	Leu	Asn	Gly	Lys	Glu	Tyr	290	295	300	
Lys	Cys	Lys	Val	Ser	Asn	Lys	Ala	Leu	Pro	Ala	Pro	Ile	Glu	Lys	Thr	305	310	315	320
Ile	Ser	Lys	Ala	Lys	Gly	Gln	Pro	Arg	Glu	Pro	Gln	Val	Tyr	Thr	Leu	325	330	335	
Pro	Pro	Ser	Arg	Asp	Glu	Leu	Thr	Lys	Asn	Gln	Val	Ser	Thr	Cys	Leu	340	345	350	
Val	Lys	Gly	Phe	Tyr	Pro	Ser	Asp	Ile	Ala	Val	Glu	Trp	Glu	Ser	Asn	355	360	365	
Gly	Gln	Pro	Glu	Asn	Asn	Tyr	Lys	Thr	Thr	Pro	Pro	Val	Leu	Asp	Ser				

370						375										380
Asp	Gly	Ser	Phe	Phe	Leu	Tyr	Ser	Lys	Leu	Thr	Val	Asp	Lys	Ser	Arg	
385					390					395					400	
Trp	Gln	Gln	Gly	Asn	Val	Phe	Ser	Cys	Ser	Val	Met	His	Glu	Ala	Leu	
				405					410					415		
His	Asn	His	Tyr	Thr	Gln	Lys	Ser	Leu	Ser	Leu	Ser	Pro	Gly	Lys		
			420					425					430			